

What is claimed is:

1. A two-color radiation thermometer for measuring a temperature of an object, comprising:

one image pickup device having a light receiving surface  
5 with a plurality of micro photo receiving elements arranged two-dimensionally, said light receiving surface having a first area and a second area,

light diverging means for guiding light radiated from the object toward the first area and the second area,

10 light selecting means formed at a front side of the image pickup device for selecting first and second wavelengths of the light irradiated on the first area and the second area, and

temperature calculation means electrically connected to the image pickup device, said temperature calculation means  
15 receiving a first image signal corresponding to the first wavelength from the micro photo receiving elements located in the first area and a second image signal corresponding to the second wavelength from the micro photo receiving elements located in the second area, and calculating the temperature of  
20 the object based on the first and second image signals.

2. A two-color radiation thermometer according to claim 1, wherein said light diverging means includes a first prism for guiding the light with the first wavelength toward the first  
25 area and a second prism for guiding the light with the second wavelength toward the second area.

3. A two-color radiation thermometer according to claim 2, wherein said first prism includes a first wavelength selective

filter, and said second prism includes a second wavelength selective filter.

4. A two-color radiation thermometer according to claim 1,  
5 wherein said light diverging means includes a first polarizing beam splitter for guiding the light with a first polarized light wave toward the first area and a second polarizing beam splitter for guiding the light with a second polarized light wave toward the second area.

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5. A two-color radiation thermometer according to claim 4,  
wherein said light selecting means further includes a first wavelength filter for guiding the first polarized light toward the first area and a second wavelength filter for guiding the  
15 second polarized light toward the second area.